

Idaho Observational Seat Belt Survey

2004

Final Report

Prepared by the Office of Highway Safety

IDAHO TRANSPORTATION DEPARTMENT

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Background

The methodology concerning the observational seat belt survey was changed in 1998 in accordance with The National Highway Traffic Safety Administration's (NHTSA) guidelines. An entirely new sample of observation sites was selected using a two-stage probabilistic sampling method. The method of analysis also changed to correct for the probabilistic sampling and determine the standard error correctly. Comparisons of 1998 and future surveys to historical data (1986 – 1997 surveys) should be made with caution as the new methodology differs greatly from the previous methodology.

It is physically impossible to observe every front seat occupant of every vehicle on every roadway for every day of the year. For this reason, a sample of sites was taken that covers the state geographically and captures the different types of traffic patterns, by adequately selecting the different types of roadways. The sample was selected randomly; however, counties with higher Annual Vehicle Miles of Travel (AVMT) and roadways with greater Average Daily Traffic (ADT) were more likely to be picked. While this helps to insure a cost-effective sample, it also introduces bias that must be accounted for and corrected in the analysis. Site-specific weights are calculated for a number of aspects and special software is used in the estimation process. The following table shows the 2004 estimated statewide usage, the standard error and the 95% confidence interval for the statewide estimate.

The estimated usage is the percentage of people observed wearing seat belts. The standard error is the average difference between the observed usage at each site and the estimated usage. The standard error is also an indication of how precise the sample is. The lower and upper 95% confidence limits define the 95% confidence interval. The 95% confidence interval is derived from the estimated usage and the standard error. The appropriate interpretation of the confidence interval is that if we were to do 100 surveys, we would expect 95 out of the resulting 100 confidence intervals to contain the "true" usage. The "true" usage is what we would get if we could observe every front seat occupant of every vehicle on every road for every day of the year. In other words, we are 95% confident the "true" statewide usage in 2004 lies between the 68.7% and 79.4%.

2004 Statewide Seat Belt Usage

Estimated Statewide Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
74.0%	2.7%	68.7%	79.4%

2004 Statewide Seat Belt Usage by Vehicle Type

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Passenger Cars	78.5%	2.3%	73.9%	83.0%
Vans & SUV's	79.1%	2.3%	74.5%	83.6%
Pick-Up Trucks	61.9%	4.3%	53.3%	70.4%

The estimated seat belt usage for pick-up truck occupants continues to be substantially lower than seat belt usage for either passenger cars or vans and sport utility vehicles (SUV's). The difference between seat belt use in pick-up trucks and in other vehicles is statistically significant.

2004 Seat Belt Usage by Transportation District

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
District 1	76.2%	1.5%	73.3%	79.0%
District 2	75.4%	1.9%	71.6%	79.2%
District 3	82.4%	3.2%	76.1%	88.7%
District 4	59.6%	4.6%	50.5%	68.7%
District 5	57.1%	2.9%	51.3%	62.9%
District 6	66.3%	4.4%	57.7%	75.0%

2004 Seat Belt Usage by County

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Ada	85.3%	3.9%	77.6%	92.9%
Bannock	61.2%	1.4%	58.5%	63.8%
Bingham	45.2%	3.2%	39.0%	51.4%
Blaine	68.6%	1.6%	65.5%	71.8%
Bonner	75.3%	1.9%	71.7%	79.0%
Bonneville	72.4%	4.5%	63.6%	81.2%
Canyon	77.9%	1.2%	75.6%	80.1%
Cassia	41.8%	9.6%	23.1%	60.6%
Elmore	70.2%	2.4%	65.4%	75.0%
Kootenai	76.8%	2.1%	72.6%	81.0%
Latah	71.9%	0.7%	70.5%	73.3%
Madison	58.0%	2.4%	53.4%	62.6%
Minidoka	54.2%	2.8%	48.6%	59.7%
Nez Perce	77.6%	2.3%	73.1%	82.1%
Payette	76.1%	2.6%	71.1%	81.1%
Twin Falls	73.2%	3.3%	66.8%	79.6%

Not all counties in Idaho are included in the sample. For a more detailed explanation of how and why these counties were selected, please refer to Appendix A (page 11).

2004 Seat Belt Usage by Day of the Week

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Sunday	63.6%	1.1%	61.4%	65.8%
Monday	71.9%	2.2%	67.7%	76.2%
Tuesday	68.9%	4.2%	60.7%	77.1%
Wednesday	70.6%	2.8%	65.2%	76.1%
Thursday	79.8%	6.6%	66.8%	92.8%
Friday	74.9%	2.6%	69.8%	80.0%
Saturday	83.9%	2.4%	79.1%	88.7%

2004 Seat Belt Usage by Type of Vehicle

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Passenger Cars	78.5%	2.3%	73.9%	83.0%
Vans & SUV's	79.1%	2.3%	74.5%	83.6%
Pick-Up Trucks	61.9%	4.3%	53.3%	70.4%

2004 Usage by Observation Site

County	Location	Designated Road	Intersection	Usage
Bonner	1	Cedar (US 95)	at N. 2nd	80.5%
	2	Albeni Rd (US 2)	at SH 57	77.8%
	3	Dufort Rd	at US 95	73.2%
	4	US 95	at Larch	85.5%
	5	Cedar	at Boyer	75.1%
	6	US 2	at Division	88.5%
Kootenai	7	I-90 - Off Ramp	Exit # 7 (SH 41)	89.0%
	8	Mullan Rd	at SH 41	74.6%
	9	SH 41	at SH 53	81.5%
	10	SH 53	at US 95	81.8%
	11	15th Street	at Sherman Ave	73.1%
	12	I-90 - Off Ramp	Exit #14	78.9%
	13	US 95	At SH 53	86.3%
	14	Lincoln Way (US 95)	at Appleway	83.9%
Latah	93	SH 8	at Blaine	74.0%
	94	6th St	at Blaine	72.5%
	95	Jackson St	at 6th St	70.3%
	96	US 95	at Sweet Ave	74.6%
Nez Perce	97	US 12	at 3rd Ave N.	87.5%
	98	Main	at 13th St	77.5%
	99	16th Ave	at 17th St.	80.5%
	100	Powers Ave	at Thain Rd	73.0%
Ada	15	Overland	at Meridian Rd.	77.5%
	16	SH 55	at Floating Feather	82.8%
	17	Collister Dr	at Catalpa Dr	81.4%
	18	Mcmillan Rd	at Locust Grove	71.3%
	19	Franklin Rd	at Ten Mile	76.3%
	20	I-184 - Off Ramp	Curtis Road Exit	92.2%
	21	Chinden Blvd	at 36th St.	90.6%
	22	Cole Road	at Emerald	88.8%
	23	9th Street	at River St	90.0%
	24	Hayes St	at 13th St	86.1%
	25	N. Liberty	at Fairview	74.0%

2004 Usage by Observation Site - Continued

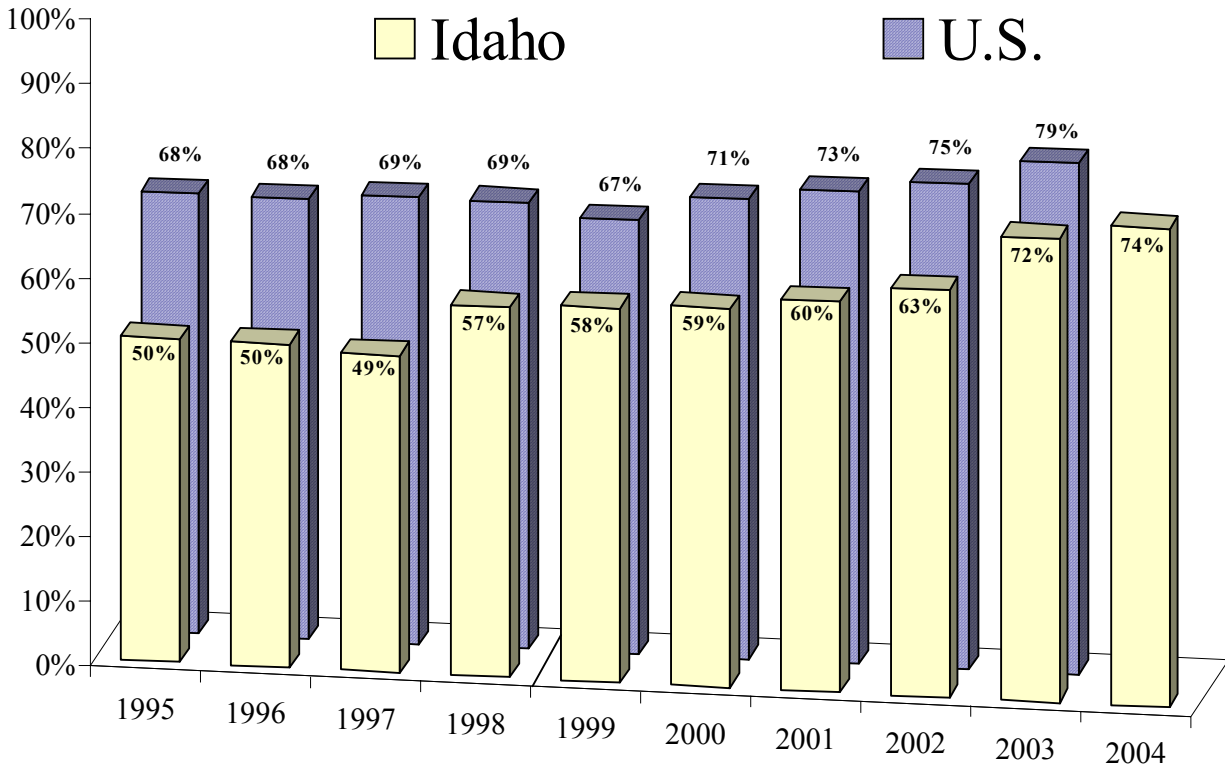
County	Location	Designated Road	Intersection	Usage
Canyon	26	Gekeler Rd	at W Boise Ave	85.9%
	27	Eagle Road	at Chinden Blvd	90.1%
	28	Jupiter (Entertainment)	at Overland	89.8%
	29	Adams Rd.	at E 44th St	72.4%
	30	SH 16	Jct w/ SH 44	83.2%
	31	Linden	at Indiana	72.5%
	32	US 20	at Middleton Rd	81.5%
	33	SH 55	at South 10th Ave	73.4%
	34	Centennial Way	at SH 19	76.6%
	35	I-84 - Off Ramp	Exit # 38-Garrity	86.7%
Elmore	36	Amity Rd	at South Side Blvd	82.7%
	37	Greenhurst	at 12th Ave	78.8%
	38	7th Ave	at 3rd St	76.5%
	39	I-84 Business Loop	at SH 51	69.5%
	40	I-84 - Off Ramp	Exit # 95	85.4%
	41	SH 51	at SH 67	68.0%
	42	American Legion	at 3rd East	68.1%
	43	3rd E St	at 10th N St	64.8%
	44	McMurtrey	at Canyon Creek	68.5%
	45	US 95 (16th St)	at 8th St	78.2%
Payette	46	8th Street	at Center St	76.4%
	47	US 95	at NW 16th St	82.8%
	48	SH 72	at US 30	69.8%
Blaine	67	Gannett Rd	at US 20	73.2%
	68	US 20	at Jct US 93/26	82.2%
	69	US 20	at SH 75	93.5%
Cassia	70	Saddle Rd	at Sun Valley Rd	61.2%
	71	Main St (SH 75)	at 1st St	64.4%
	72	Main St (SH 75)	at Bullion St	71.0%
	49	E. 5th St	at Overland	34.8%
	50	W Main	at Oakly	54.2%
	51	SH 77	at SH 81	25.2%
	52	I-84 - Off Ramp	Exit # 216	79.8%

2004 Usage by Observation Site – Continued

County	Location	Designated Road	Intersection	Usage
Minidoka	53	200 S.	at SH 27	37.5%
	54	Overland Ave	at 14th St	64.0%
	55	I-84 - Off Ramp	Exit #211 Rupert/Heyburn Exit	64.3%
	56	I-84 - Off Ramp	Exit # 201 Paul Exit	71.4%
	57	Overland Rd	at 5th St	64.2%
	58	O St	at 21st St	53.6%
Twin Falls	59	SH 24 (8th St)	at Meridian	71.5%
	60	SH 25	at SH 27	47.4%
	61	3700 N	at US 93	57.4%
	62	Blue Lakes Blvd	at Falls Ave	83.9%
	63	3rd St E	at 6th Ave N	85.7%
	64	Washington St	at South Park	76.0%
Bannock	65	Kimberly Rd (US 30)	at Eastland	69.7%
	66	Eastland Dr	at Orchard	67.7%
	73	Garrett Way (US 30)	at E Gould St	62.6%
	74	West Quinn Rd	at Poleline Rd	55.5%
Bingham	75	I-15 - Off Ramp	Exit # 47 (US 30)	78.6%
	76	S Main	at Benton Rd	63.2%
	77	Fir St	at US 91	37.8%
	78	US 91	at Fir St	39.2%
Bonneville	79	W Judicial St	at Broadway	48.0%
	80	I-15 - Off Ramp	Exit # 89	70.9%
	81	SH 43 (Ucon Exit US 20)	at SH 43/Yellowstone	64.0%
	82	Sunnyside Dr	at Woodruff Ave	73.0%
	83	Lincoln Rd	at Woodruff Ave	65.1%
	84	US 26	at 15th E (St Leon Rd)	62.0%
	85	Grandview Dr	at Skyline Dr	67.1%
	86	US 20	Riverside - Exit #93	71.6%
Madison	87	N Holmes Ave	at 5th St	62.1%
	88	I-15BL (Exit #113)	at Jct US 91	81.1%
	89	S 2nd E	at E 1st S	53.1%
	90	S 2nd W	at W 2nd S	59.0%
	91	US 20	at SH 33 (Rexburg Exit)	68.2%
	92	E Main St	at Center St	60.0%

Seat Belt Usage Trends

Idaho Seat Belt Usage vs. U.S. Seat Belt Usage



Slight changes in the observational seat belt survey existed from year to year prior to 1998. In 1998 the observational survey was completely revised to ensure national compliance and to produce a more accurate usage estimate. Comparisons of 1998 and future surveys to historical surveys (1986 – 1997) should be made conservatively as the new methodology differs greatly from the previous methodologies. The U.S. observed usage is calculated from the observed usage rates in each state. This figure is obtained from the National Center for Statistics and Analysis.

From 2003 to 2004 the Idaho observed seat belt usage increased from 71.7% to 74.0%. This represents a 3.2% increase in seat belt usage from 2003 to 2004. Idaho's seat belt law was strengthened July 1, 2003.

Observed Usage - Transportation District by Year

	2000	2001	2002	2003	2004	Ave Yearly Change 2000-2004
District 1	62.1%	57.7%	70.6%	76.5%	76.2%	5.8%
District 2	56.7%	56.6%	68.4%	74.3%	75.4%	7.7%
District 3	61.9%	64.6%	63.3%	78.8%	82.4%	7.8%
District 4	45.9%	51.0%	53.6%	59.3%	59.6%	6.8%
District 5	46.7%	54.4%	55.4%	53.5%	57.1%	5.4%
District 6	51.5%	56.4%	57.8%	59.2%	66.3%	6.6%

Observed Usage – County by Year

	2000	2001	2002	2003	2004	Ave Yearly Change 2000-2004
Ada	63.8%	66.8%	64.3%	81.0%	85.3%	8.1%
Bannock	49.5%	56.0%	58.5%	55.7%	61.2%	5.7%
Bingham	39.6%	51.8%	45.2%	47.4%	45.2%	4.6%
Blaine	38.9%	52.3%	60.0%	68.7%	68.6%	15.8%
Bonner	57.2%	54.4%	70.9%	74.4%	75.3%	7.9%
Bonneville	56.6%	63.4%	62.5%	59.4%	72.4%	6.9%
Canyon	58.3%	58.3%	63.2%	75.1%	77.9%	7.7%
Cassia	40.5%	49.1%	49.6%	53.9%	41.8%	2.1%
Elmore	55.0%	57.7%	52.9%	67.9%	70.2%	7.1%
Kootenai	64.6%	59.5%	70.2%	78.6%	76.8%	4.9%
Latah	61.5%	57.6%	74.0%	74.2%	71.9%	4.8%
Madison	45.1%	49.7%	52.4%	58.8%	58.0%	6.6%
Minidoka	44.3%	48.1%	48.5%	55.6%	54.2%	5.4%
Nez Perce	52.3%	56.2%	65.4%	74.4%	77.6%	10.5%
Payette	59.6%	63.3%	61.2%	71.9%	76.1%	6.6%
Twin Falls	52.6%	54.4%	58.9%	63.0%	73.2%	8.7%

Observed Usage – Vehicle Type by Year

	2000	2001	2002	2003	2004	Ave Yearly Change 2000-2004
Passenger Cars	64.8%	66.7%	66.4%	77.0%	78.5%	6.8%
SUV's/Vans	60.7%	62.2%	70.0%	76.2%	79.1%	9.2%
Pickup Trucks	46.0%	48.8%	50.9%	58.4%	61.9%	10.4%
Overall Usage	58.6%	60.4%	62.9%	71.7%	74.0%	8.2%

2004 Observed Usage – Vehicle Type by Transportation District

ITD District	Passenger Cars	Vans and Sport Utility Vehicles	Pickup Trucks	All Vehicles
1	81.3%	79.3%	63.0%	76.2%
2	80.5%	79.6%	65.5%	75.4%
3	84.7%	85.9%	75.5%	82.4%
4	69.1%	69.0%	42.2%	59.6%
5	62.3%	67.7%	38.1%	57.1%
6	73.1%	72.4%	47.8%	66.3%
Statewide	78.5%	79.1%	61.9%	74.0%

2004 Observed Usage – Vehicle Type by County

County	Passenger Cars	Vans and Sport Utility Vehicles	Pickup Trucks	All Vehicles
Ada	87.0%	87.0%	80.7%	85.3%
Bannock	64.9%	70.3%	45.2%	61.2%
Bingham	53.7%	60.1%	21.3%	45.2%
Blaine	69.1%	75.8%	55.6%	68.6%
Bonner	76.7%	85.7%	62.2%	75.3%
Bonneville	79.4%	81.5%	53.5%	72.4%
Canyon	79.9%	85.8%	67.5%	77.9%
Cassia	51.9%	49.0%	28.8%	41.8%
Elmore	75.3%	76.9%	59.5%	70.2%
Kootenai	84.5%	75.1%	63.9%	76.8%
Latah	73.8%	78.2%	65.1%	71.9%
Madison	65.0%	61.5%	37.0%	58.0%
Minidoka	68.2%	61.6%	34.5%	54.2%
Nez Perce	84.9%	80.4%	65.8%	77.6%
Payette	83.4%	78.3%	65.3%	76.1%
Twin Falls	79.8%	83.9%	58.0%	73.2%